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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/677,077	10/01/2003	Martin S. Scolaro	459900	8342

27717 7590 09/28/2005

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CHICAGO, IL 60603-5803

EXAMINER
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TRAN, CHUC

ART UNIT	PAPER NUMBER
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2821

DATE MAILED: 09/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.		Applicant(s)	
	10/677,077		SCOLARO ET AL.	
	Examiner		Art Unit	
	Chuc D. Tran		2821	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 October 2003.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/1/03</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “control input in claims 1, 8, 18”, the “temperature sensing circuit in claims 1-3, 8-9, 11, 13”, the “timing circuit in claims 2-3, 9 and 15” and the “RC circuit and capacitance discharge circuit in claim 3” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the “timing circuit (22)” as described in the specification. Any structural detail that is essential for a proper

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understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Claim Objections*

3. Claims 2-4, 9, 11 and 21 are objected to because of the following informalities:

Claim 2-3 and 9, line 2, "temperature responsive circuit" change to - - temperature sensing circuit - -;

Claim 4, line 1, "the circuitry" change to - - the control circuit - -;

Claim 11, line 1, "temperature responsive circuit" change to - - temperature sensing circuit - -;

Claim 21, line 2, "a" (control means) change to - - the - -.

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Appropriate correction is required.

*Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Henry (USP. 6,198,234.

Regarding claims 1, 18 and 20, Henry discloses a drive circuit (800) for a lamp in Fig. 4 comprising.

- an electronic switch (804, 806) connected in series with a lamp (5) and a source of DC voltage (VDD), and having a control input (16, 18), and

- a pulse-width-modulation (PWM) control circuit (802) having an input connectable to the source of DC voltage and an output connected to the control input of the electronic switch for varying lamp brightness in proportion to the PWM duty cycle (Col. 9, Line 2 and 11), the control circuit including a temperature-sensing circuit (Col. 8, Line 18) for reducing the PWM duty cycle when lamp temperature exceeds a predetermined temperature (Col. 8, Line 53) and (Col. 18, Line 23).

Regarding claim 2, Henry discloses that the control circuit includes a timing circuit and the temperature-sensing circuit includes circuitry for altering impedance of the timing circuit (Col. 6, Line 18) (Fig. 3).

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Regarding claim 3, Henry discloses that the control circuit in Fig. 4 includes an RC circuit (60) and impedance altered by the temperature sensing circuit is in a capacitance discharge circuit (810). the impedance altered by the temperature-responsive circuit is in a capacitance discharge circuit.

Regarding claim 6, Henry discloses that adjustment circuitry (20) for automatically adjusting a control voltage of the control circuit (Col. 2, Line 16) in response to a change in the voltage of the source (Col. 3, Line 24).

Regarding claim 7, Henry discloses that the adjustment circuitry includes a supply voltage-dependent voltage regulator for maintaining a constant operating voltage for the control circuit irrespective of the voltage of the source (Col. 11, Line 30).

Regarding claim 8, Henry discloses a portable spotlight in Fig. 4 comprising:

- a lamp (5); and
- a drive circuit (800) connected to the lamp, the drive circuit including
- an electronic switch (804, 806) connected in series with a lamp and a source of DC voltage (VDD) and having a control input (16, 18), and

a pulse-width-modulation (PWM) control circuit (802) having an input connectable to the source of DC voltage (VDD) and an output connected to the control input of the electronic switch (804, 806) for varying lamp brightness in proportion to the PWM duty cycle (Col. 9, Line 2 and 11), the control circuit including a temperature-sensing circuit (Col. 8, Line 18) for reducing the PWM duty cycle when lamp temperature exceeds a predetermined temperature (Col. 8, Line 53) and (Col. 18, Line 23).

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Regarding claim 12, Henry discloses that the control circuit (802) includes an integrated circuit timer (802) configured as an astable multivibrator (Fig. 4).

Regarding claim 13, Henry discloses a method of protecting a lamp circuit from overheating in Fig. 4 comprising:

- pulse-width-modulating a supply voltage for controlling lamp brightness (Col. 14, Line 57), sensing lamp circuit temperature (Col. 14, Line 56), and
- reducing the duty cycle of pulse width modulation in response to a sensed temperature exceeding a predetermined temperature (Col. 8, Line 53) and (Col. 18, Line 23).

Regarding claim 14, Henry discloses that the pulse-width-modulating includes connecting an electronic switch in series with the lamp and pulse-width-modulating a signal at a control terminal of the switch (Fig. 4).

Regarding claim 15, Henry discloses that the reducing includes altering a resistance in a timing circuit (Col. 9, Line 64).

Regarding claim 17, Henry discloses that automatically adjusting the duty cycle of pulse width modulation in response to changes in the supply voltage (Col. 3, Line 24).

Regarding claim 21, Henry discloses that adjustment means coupled to a control means for automatically adjusting the control voltage in response to changes in the voltage of the DC source (Abstract).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:



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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4-5, 9-11, 16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henry.

Regarding claims 4-5, 9-11, 16 and 19, Henry discloses a drive circuit for a lamp as described in Fig. 4 as set forth in the claims except a thermal switch is series with one of the resistance being connected parallel to the other resistance. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Henry by using the thermal switch is series with one of the resistance being connected parallel to the other resistance. The ordinary artisan would have been motivated to modify Henry in the manner described above in order to detect the temperature of the lamp (See Henry, Col. 2, Line 25) by adjusting the amplitude of the current source (See Henry, Col. 2, Line 40) for changing the input voltage to the lamp (Henry, Col. 10, Line 55) and (Henry, Col. 9, Line 8).

#### *Citation of relevant Prior Art*

Prior art Weedon (USP. 6,677,710) discloses DC output regulator using dual pulse modulation.

Prior art Weindorf (USP. 6,690,121) discloses High precision luminance control for PWM driven lamp.

#### *Inquiry*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuc D. Tran whose telephone number is (571) 272-1829. The examiner can normally be reached on M-F Flex hours.




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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TC  
September 20, 2005

  
WILSON LEE  
PRIMARY EXAMINER

~~WILSON LEE~~  
~~PRIMARY EXAMINER~~